VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE TITLE:

Please AMEND the Title of the Invention as follows:

RAID APPARATUS AND ACCESS CONTROL METHOD THEREFOR <u>WHICH BALANCES THE USE OF THE DISK UNITS</u>

IN THE SPECIFICATION:

Please AMEND the paragraph beginning at page 7, line 1, as follows:

This disk controller 10 has a memory 22 for storing the number of operations, requested to each physical disk unit, for each physical disk unit. The disk controller 10 further includes a control circuit 21 for accessing one of a plurality of physical disk units which form the [designed] <u>designated</u> logical volume, in accordance with the number of the operations.

Please AMEND the paragraph beginning at page 9, line 24 continuing on to page 10, as follows:

When the channel adapter [21] <u>20</u> completes data transfer, the resource manager 21 releases the area in the main storage 23 in the read process. In the write process, the resource manager 21 writes the data in the main storage back to the associated magnetic disk unit, and then frees the main storage 23.

Please AMEND the paragraph beginning at page 10, line 18, as follows:

As shown in FIG. 4, the DM management table 22-2 of the table storage 22 stores the statues, the numbers of loads and the connected DA numbers of the individual [logical volumes] <u>magnetic disk units</u> "0" to "255". The status includes degrade information indicating whether each magnetic disk unit is normal or abnormal and information indicating whether each of a pair of device adapters to which each magnetic disk unit is connected is normal or abnormal.

IN THE CLAIMS:

Please CANCEL claims 1-12

Please ADD the following new claims 13-16:

13. (NEW) A RAID apparatus comprising:

a plurality of physical disk units storing a plurality of copies of each of logical volumes; and

a disk controller accessing any of the physical disk units which stores a designated logical volume to thereby access said designated logical volume,

said disk controller including:

a plurality of device adapter for accessing said physical disk unit in accordance with a request, said plurality of device adapter are connected to each physical disk unit;

a memory storing the number of operations requested to each physical disk unit and statuses of said connected device adapters, for each physical disk unit; and

control means for comparing numbers of operations corresponding to a plurality of physical disk units which store said designated logical volume with each other, selecting the single physical disk unit from the disk units storing the designated logical volume which has a minimum number of operations based on the comparison, judging whether or not said device adapter connected to said selected single minimum waiting physical disk is normal from referring said statues of said connected device adapters, and outputting a request to said determined device adapter.

14. (NEW) The RAID apparatus according to claim 13, wherein said memory comprising:

a logical volume structure table storing statuses and said plurality of physical disk units of each logical volume; and

a disk management table storing the number of operations and said statuses of said connected device adapters of each physical disk unit.

15. (NEW) An access control method for a RAID apparatus comprising a plurality of physical disk units storing a plurality of copies of each of logical volumes, and a disk controller accessing any physical disk unit which stores a designated logical volume to thereby access said designated logical volume, said method comprising:

determining a plurality of physical disk units which store a designated logical volume;

comparing the number of operations corresponding to a plurality of physical disk units which store said designated logical volume with each other;

selecting the single physical disk unit from the disk units storing the designated logical volume which has a minimum number of operations based on the comparison;

judging whether or not said device adapter connected to said selected single minimum waiting physical disk is normal from referring statues of said connected device adapters; and

outputting a request to said determined device adapter.

16. (NEW) The access control method according to claim 15, wherein said determining comprising determining said plurality of disk units by referring a logical volume structure table storing statuses and said plurality of physical disk units of each logical volume;

said selecting comprising selecting the single physical disk unit by comparing the number of operations in a disk management table storing the number of operations and said statuses of said connected device adapters of each physical disk unit; and

said judging said device adapter comprising judging whether or not said device adapter is normal by referring said disk management table.